

# EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 2002311277  
PUBLICATION DATE : 23-10-02

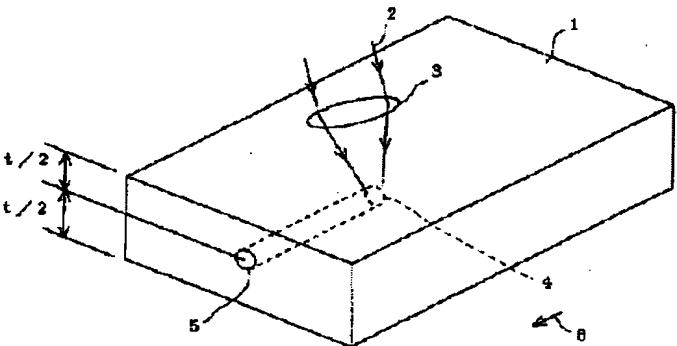
APPLICATION DATE : 17-04-01  
APPLICATION NUMBER : 2001118611

APPLICANT : HITACHI CABLE LTD;

INVENTOR : IMOTO KATSUYUKI;

INT.CL. : G02B 6/13 G02B 6/12

TITLE : PRODUCTION METHOD FOR GLASS  
WAVEGUIDE



ABSTRACT : PROBLEM TO BE SOLVED: To provide a production method for a glass waveguide, by which the glass waveguide having low-loss stable characteristics can be provided.

SOLUTION: The light propagating part of a high refraction factor is formed by converging a femto-sec laser pulse 2 at a position almost in the 1/2 thickness of a transparent glass pane 1. Since the light propagating parts 5 of the high refraction factor are continuously formed inside the transparent glass pane 1 by relatively moving this transparent glass pane 1 and the focal point of the fernto-sec laser pulse 2, even when thermal distortion caused by laser radiation is remained in the transparent glass pane 1, since the waveguide has an almost symmetric structure, polarization dependency hardly occurs.

COPYRIGHT: (C)2002,JPO